Applicants: Steven H. Barss Attorney Docket No.: 09991-147001

Serial No.: 10/749,622

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LISTING OF CLAIMS:

1. (Original) A method of fluid drop ejection, comprising: providing a printhead including a

fluid flow path in which fluid is pressurized to eject drops from a nozzle opening, the nozzle

opening being disposed in a well, supplying fluid to the well from the nozzle opening to form a

meniscus, the meniscus defining a fluid depth above the edge of the nozzle opening equal to

about 1 to 15% of the nozzle opening width with the well filled with fluid.

2. (Original) The method of claim 1 comprising forming the meniscus by controlling the

pressure at the meniscus.

3. (Original) The method of claim 1, comprising forming the meniscus by reducing the pressure

in the fluid.

4. (Original) The method of claim 3 comprising applying a vacuum at a location upstream of

the nozzle opening.

5. (Original) The method of claim 3 wherein the vacuum at the nozzle opening is about 0.5 to

10 inwg.

6. (Original) The method of claim 1 wherein the ratio of the well width to the nozzle opening

width is about 1.4 to about 2.8.

7. (Original) The method of claim 1 wherein the well has a depth of about 0.15 to 0.5 of the

nozzle opening.

8. (Original) The method of claim 1 wherein the spacing between well perimeter and nozzle

perimeter is about 0.2 or more of the nozzle width.

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9. (Original) The method of claim 1 wherein the fluid has a surface tension of about 20-45

dynes/cm.

10. (Original) The method of claim 1 wherein the nozzle opening and the well are defined by a

common body.

11. (Original) The method of claim 1 wherein the nozzle opening and/or the well are defined in

silicon material.

12. (Original) The method of claim 1 wherein the nozzle and/or the well are defined in a metal.

13. (Original) The method of claim 1 wherein the nozzle and/or the well are defined in carbon.

14. (Original) The method of claim 1 wherein the nozzle and/or well are defined in a plastic.

15. (Original) The method of claim 1 wherein the fluid is pressurized by a piezoelectric

element.

16. (Original) The method of claim 1 wherein the nozzle opening width is about 70 micron or

less.

17. (Original) The method of claim 1 including a plurality of nozzle openings, the nozzle

openings having a pitch of about 25 nozzles/inch or more.

18. (Original) The method of claim 1 including ejecting drops having a volume of about 1 to

about 70 pL.

19-32. (Cancelled)

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33. (Original) The drop ejector of claim 18 wherein the fluid is pressurized by a piezoelectric element.

- 34. (Original) The drop ejector of claim 18 wherein the nozzle opening has a diameter of about 70 micron or less.
- 35. (Original) The drop ejector of claim 18 including a plurality of nozzle openings, the nozzle openings being a pitch of about 100 nozzles/inch or more.
- 36. (Cancelled)
- 37. (Original) The drop ejector of claim 34 wherein the well is an oval.